Preface

The following papers were contributed to the Workshop on Mixed-Initiative Case-Based Reasoning (MI-CBR), held at the 2003 International Conference on Case-Based Reasoning (www.aic.nrl.navy.mil/~aha/iccbr03-micbrw). Our objective for this workshop was to build on the ECCBR'02 MI-CBRW by providing an interactive forum for discussing and encouraging the analysis, extension, development, and demonstration of MI-CBR methodologies. These are characterized by an iterative and collaborative sharing/swapping of control between problem-solving agents (e.g., such as a user and a software system performing case retrieval via an incremental query elaboration process), where the roles of the agents are opportunistically assumed rather than pre-determined. Our primary goals were to identify roles of mixed-initiative intelligent approaches in CBR approaches for problem solving (i.e., for both analysis and synthesis tasks), and to comparatively analyse alternative MI-CBR approaches. We sought to identify interesting unsolved problems that require further attention, and approaches for solving them.

Among these papers, Aragones and her colleagues discuss a reachback system that remotely monitors and diagnoses GE Locomotives to help a user to constantly evaluate equipment and determine when maintenance intervention is necessary. Coyle and Cunningham discuss the Personalised Travel Assistant, which helps a user to arrange flights by learning user preferences and rating flights automatically. In the context of designing aircraft equipment, Delprat details the mixed-initiative interactions between a user and a software assistant communicating via a graphical dialog. Göker extends seminal MI-CBR work on the Adaptive Place Advisor, illustrating how a web self-service tool can adapt to the user's level of expertise. Gupta and Aha present and apply a framework for comparing MI-CBR systems that perform incremental query formulation during case retrieval. McGinty and Smyth empirically analyse two adaptive selection strategies for intention recognition in conversational recommender systems, examining the quality of the recommendations cycles they produce. McSherry discusses recommender system techniques for generating explanations in response to over-constrained queries to help users understand why no cases match their query so that they can construct more successful queries. Finally, Woon and her colleagues, in the context of a pneumatic conveyor problem, discuss how CBR can improve the usability of numerical models.

We hope that this workshop helped to enhance communication among active MI-CBR researchers and developers and generated ideas for future research and development, including feasible and productive suggestions for dissertation topics. Many thanks to Lorraine McGinty, ICCBR'03 Workshop Chair for her assistance in helping us to hold and schedule this workshop. Finally, thanks also to the participants; we hope you found this to be re-useful!

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